

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 9, 2010 has been entered.

Status of Claims

2. Claims 18-26 are currently under examination wherein claims 18 has been amended and claims 23-26 have been newly added in applicant's amendment filed on September 9, 2010. Original claims 1-17 have been cancelled by the applicant in the same amendment.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 18-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Purnell et al. (US 5,062,908) in view of Brophy (US 1,799,500).

With respect to claims 18 and 23, Purnell et al. ('908) discloses a process for manufacturing a metal-infiltrated powder metal part comprising compacting a metal

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powder to form a compact; forming an infiltrant blank from a wrought metal sheet, placing the infiltrant blank in contact with the compact; and heat-treating (i.e. simultaneously sintering and infiltrating) the compact at a temperature sufficient to form a sintered compact with a matrix having pores and to melt the wrought metal such that the melted wrought metal infiltrate the pores of the matrix (col. 4, lines 35-52). Purnell et al. ('908) does not disclose the claimed feature of a locating element on the infiltrant blank that is suitable for engaging a corresponding locating element on the compact to restrict movements of the infiltrant blank relative to the compact. Brophy ('500) discloses anchoring a copper sheet with an irregular surface containing crests and depressions which correspond exactly in shape and position to those of the irregular surface of a base (page 1, line 70 to page 2, line 3). The crests and depressions which correspond exactly in shape and position to those of the irregular surface of the base disclosed by Brophy ('500) would read on the claimed locating element on the infiltrant blank that is suitable for engaging a corresponding locating element on the compact. It would have been obvious to one of ordinary skill in the art at the time of the invention to use an infiltrant metal sheet having location elements corresponding exactly in shape and position to those of the irregular surface of a compact in order to anchor the infiltrant metal sheet to the compact as disclosed by Brophy ('500) (page 1, line 70 to page 2, line 3).

With respect to claim 19, Purnell et al. ('908) discloses that the powder metal comprises iron and the wrought metal comprises copper (col. 4, lines 35-52).

With respect to claim 20, Purnell et al. ('908) discloses that the wrought metal sheet has a thickness of 0.55 mm (col. 4, lines 35-52) which is within the claimed range of less than 1 mm. A prima facie case of obviousness exists. See MPEP 2144.05 I.

With respect to claim 21, Brophy ('500) discloses that the copper sheet is formed by stamping (page 2, lines 110-114).

With respect to claims 22 and 26, Brophy ('500) discloses that the copper sheet is provided with an extending tab projecting from one lateral edge and lying in the plane of the under surface of the base (page 2, line 14 to page 3 line 6).

With respect to claim 24, Purnell et al. ('908) further discloses sintering the compact at a temperature sufficient to form a sintered compact with a matrix having pores before the heat treatment (i.e. infiltration) (col. 2, line 67 to col. 3, line 2).

With respect to claim 25, Brophy ('500) discloses that the copper sheet is placed on a top outer surface of the base (page 3, lines 7-12)

Response to Arguments

4. The applicant's arguments filed on September 9, 2010 have been fully considered but they are moot in view of the new ground of rejection as stated above.

Conclusions

5. This Office action is made non-final. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Weiping Zhu whose telephone number is 571-272-6725. The examiner can normally be reached on 8:30-16:30 Monday to Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emily Le can be reached on 571-272-0903. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Weiping Zhu/
Examiner, Art Unit 1734

8/26/2011